IRIS *Series*
EXAMINATION LIGHT

SKYTRON®

OWNERS MANUAL

1/2008

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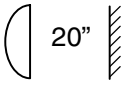
Warning: Refer to Operations / Maintenance Manual

Risk of burns



20 inch minimum distance to flammable parts

Medical Equipment Classified by Underwriters Laboratories with respect to electric shock, fire, mechanical and other specified hazards only in accordance with UL 60601-1 and CAN/CSA C22.2 No. 601.1

Although current at the time of publication, SKYTRON'S policy of continuous development makes this manual subject to change without notice.

WARNING

Maintenance must be performed by qualified service personnel. Always verify that the 120VAC power supply is disconnected before performing service.

The Iris IR7S Stand Mount Examination Light is equipped with a hospital grade plug for protection against shock hazard. It must be plugged directly into a properly grounded three-prong receptacle. Grounding reliability can be achieved only when a hospital grade receptacle is used.

For use only in dry rooms not subject to risk of explosion.

Maintain a distance of at least 20 inches between the patient and the light head.

Do not operate the light near flammable objects.

Do not leave the light unattended while in operation.

The light is hot while in operation. Do not touch the protective glass or bulb while the light is turned on or immediately after turning it off. Allow the light to cool before attempting maintenance.

Do not operate the light if any components are damaged.

When replacing the halogen light bulb, use only the bulb specified in this manual.

Use only manufacturer approved replacement parts.

WARNING

Indicates a possibility of personal injury.

NOTE

Indicates important facts or helpful hints.

CAUTION

Indicates a possibility of damage to equipment.

INTRODUCTION

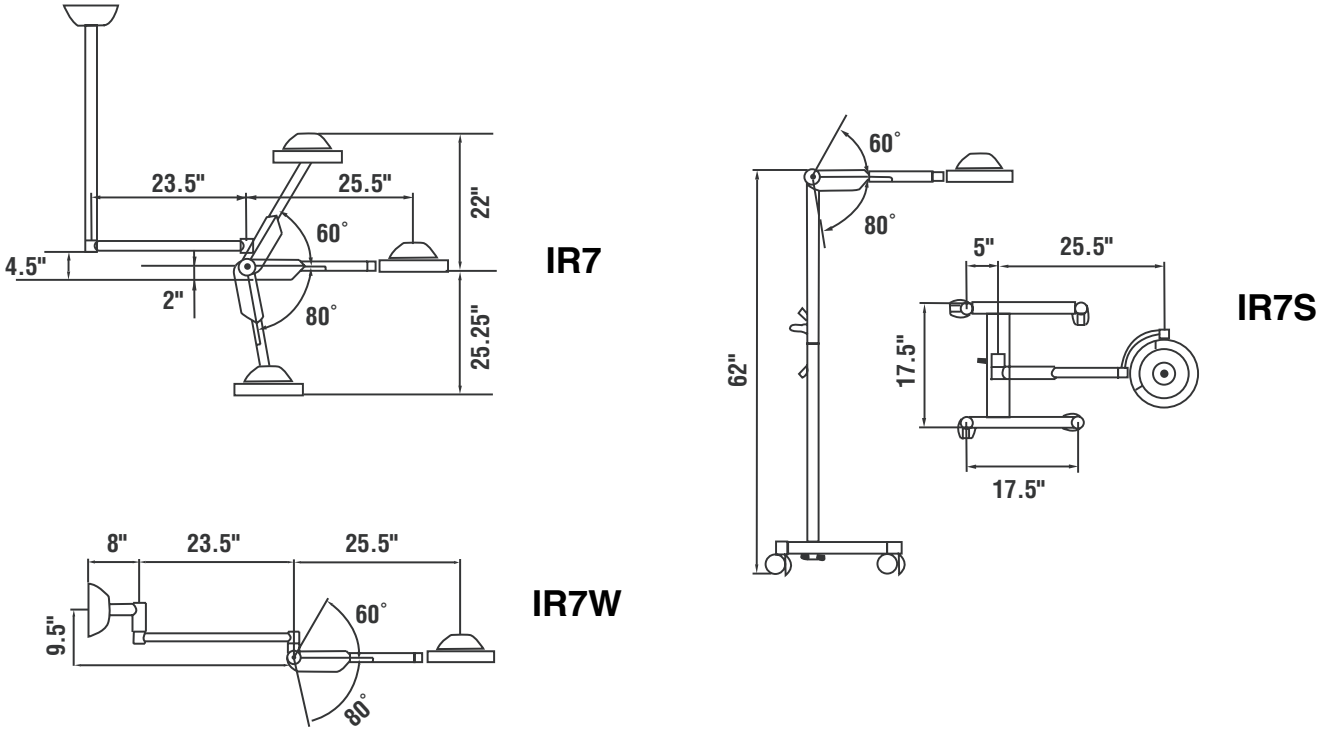


Figure 1-1.

SKYTRON's Iris series Examination light consists of a 7 inch diameter lighthead mounted on a spring balanced arm system. The arm system may be mounted on a portable stand - Model IR7S, on a wall mount - Model IR7W or on a ceiling mount - Model IR7.

SECTION I OPERATION

Using the positioning ring or the optional sterile handle, place the lighthead in the desired position. Refer to figure 1-2 for positioning capabilities.

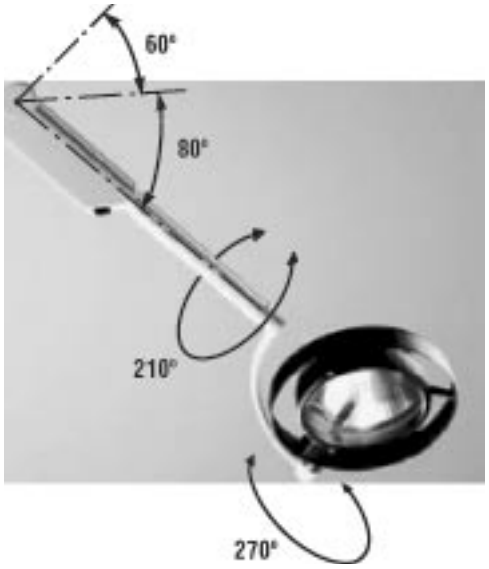


Figure 1-2.

Turn the power to the lighthead fon using the right switch. Select the Intensity with the left switch. Refer to figure 1-3.

Figure 1-3.

Model IR7S

CAUTION

Exercise caution when rolling the stand light to avoid getting caught on obstacles laying on the floor. Avoid a tripping hazard.

CAUTION

To ensure proper circuit grounding reliability and protection, always plug the fixture into a properly circuit protected electrical outlet.

SECTION II MAINTENANCE

General

To insure proper operation and extend the life of your SKYTRON examination lighting system, the following preventive maintenance procedures are recommended.

NOTE

All repairs should be made using only authorized SKYTRON replacement parts.

Daily Maintenance

Daily or between cases, the light fixture should be wiped down with a mild cleaning solution which will not affect the painted or acrylic parts.

• Before attempting cleaning, be sure power to the lighthead is "OFF" and the fixture has sufficiently cooled.

•Avoid the use of cleaning solutions which contain high concentrations of alcohol, ethelene glycol, phenol, iodophors, or glutaraldehyde based disinfectants. Some degree of staining, pitting, and discoloration may occur if these are used.

Always consult with the manufacturer of the cleaning agent for proper application and use. Always spot test on an inconspicuous area before use.

• Use glass/plexi-glass cleaners or a mild detergent and water on the transparent cover, DO NOT use alcohol based cleaners on the polycarbonite plastic.

• Avoid using excessive amounts of spray cleaners. Leakage of fluids into the lighthead interior may cause corrosion of electrical components.

Adjustments

The Spring Balanced Arm is pre-set at the factory for proper operation. If an adjustment is necessary, remove the Spring Cover and turn the adjustment nut with a 5/32" pin punch until proper balance is achieved. Turn nut clockwise to increase tension, counterclockwise to decrease. Refer to figure 2-1.

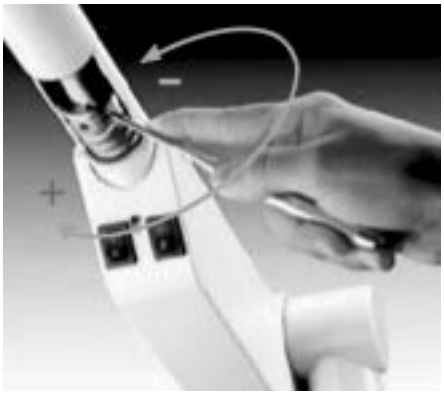


Figure 2-1

Bulb Replacement

To replace the Halogen bulb, use the following procedure:

1. Ensure electrical power to the light is "OFF" and the bulb has cooled before changing.

2. Raise the protective back cover of the lighthead and remove the Allen Wrench stored there. See figure 2-2.

Figure 2-2.

3. Using the Allen Wrench, remove the lighthead retaining screws and remove the cover ring and reflector. Refer to figure 2-3.

Figure 2-3.

NOTE

Halogen bulbs are sensitive to body oils. DO NOT handle the glass surface of bulb as body oil from your fingers can create a "hot spot" and may cause the bulb to burn out prematurely.

4. Use a soft cloth to remove the bulb and install the new one. See figure 2-4.

Figure 2-4.

5. Replace the reflector and cover ring and secure with the retaining screws. Replace the Allen wrench.

SECTION III ASSEMBLY / INSTALLATION

Model IR7S, Stand Model Assembly

Use the following procedure to assemble the IR7S. Refer to figure 3-1. All assembly hardware is included with the fixture.

1. Install the Vertical Support Tube and Support Washer on the base and secure with two Allen Bolts and Star Washers (one M8, one M6).

2. Install the Spring Balanced Arm into the Vertical Support Tube making sure the holes are aligned. Secure with the Cable Support and one M4x14 Allen Screw.

3. Connect the Lighthead wires to the Arm wires making sure no metal portion of the connectors is exposed. Install the Lighthead into the Arm and secure with two Flat Head Allen Screws.

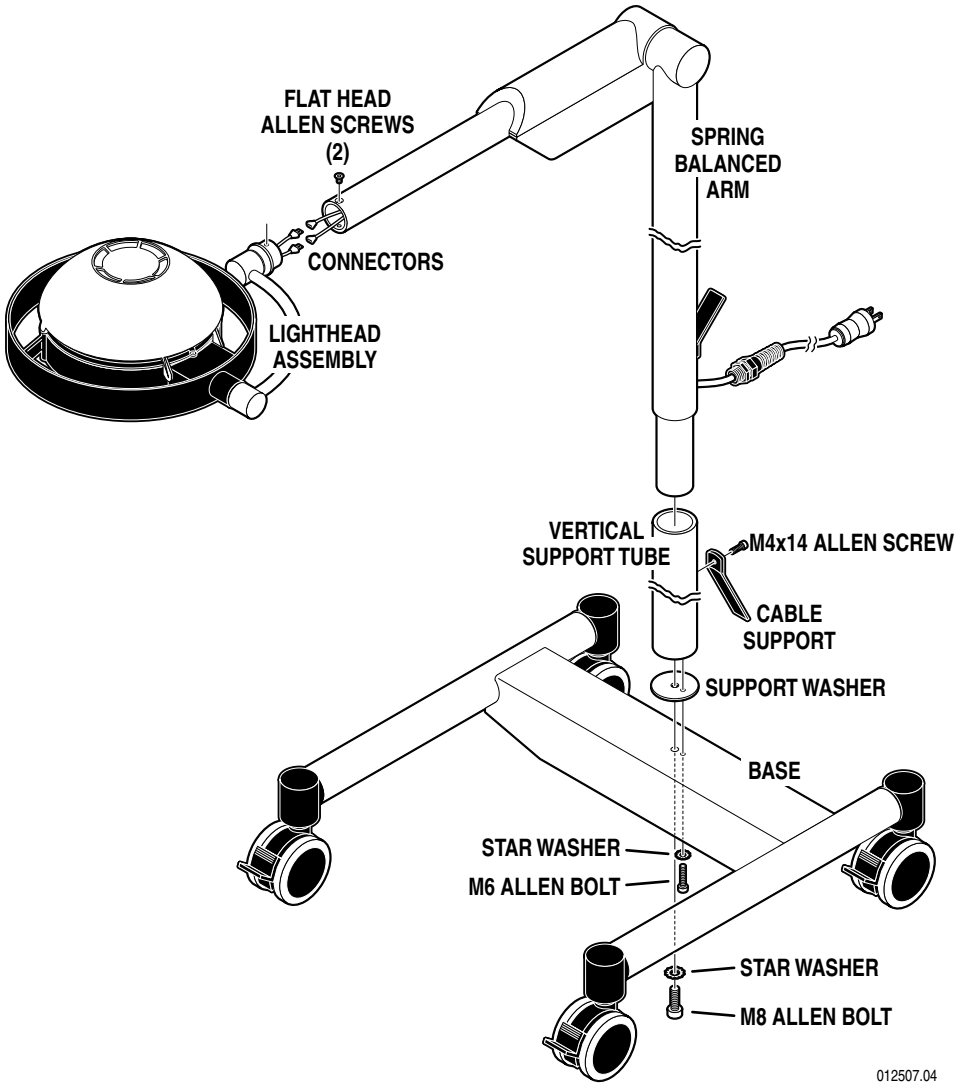


Figure 3-1. Model IR7S Assembly

Model IR7, Ceiling Mount Model Installation

Use the following procedure to install the IR7. Refer to figure 3-2. All assembly hardware is included with the fixture.

1. Drill mounting holes in accordance with the Drilling Template provided. Four holes, 8mm Dia., 55mm deep. Attach the Anchor Plate using the four Anchor bolts. Tap the bolts completely in using a hammer and tighten the nuts.

2. Pull the electrical cable through the Angle Tube. Install the Slider Block into the groove on the arm, install the arm in the Angle Tube and secure with the Set Screw. Tighten the Set Screw then loosen it 1/4 turn and check the movement of the arm. Set Screw should be flush.

3. Install the O-Ring and Cover on the Angle Tube. Install the Angle Tube into the Anchor Plate, install the locking bolt and tighten the Clamp bolts.

4. Connect the electrical wires to 120VAC input at the Anchor Plate terminal strip. Place the Cover in position and secure with the O-Ring.

5. Connect the Lighthead wires to the Arm wires making sure no metal portion of the connectors is exposed. Install the Lighthead into the Arm and secure with two Flat Head Allen Screws.

Refer to seismic calculations in the back of this manual if applicable.

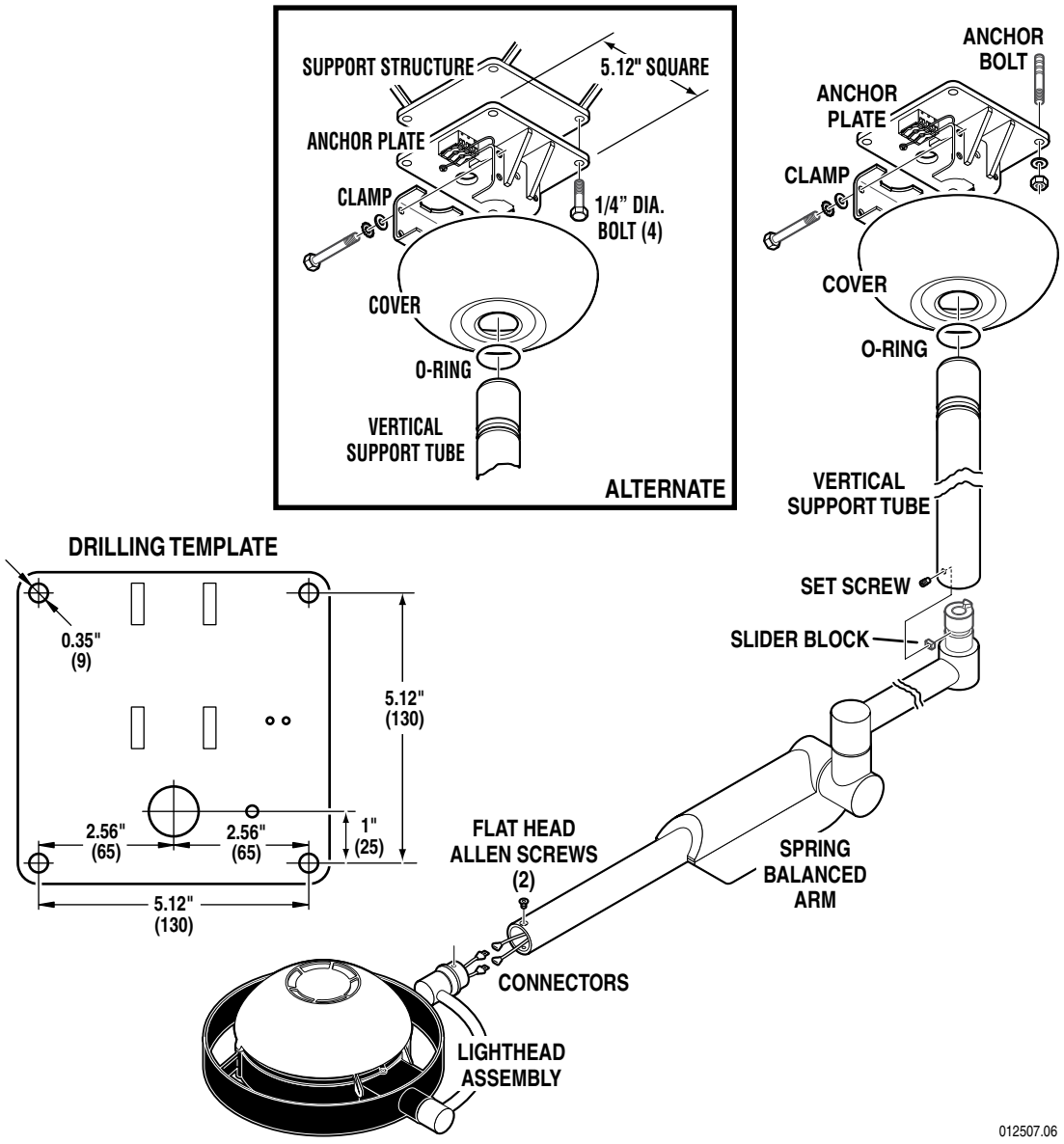


Figure 3-2. Model IR7 Installation

Model IR7W, Wall Mount Model Installation

Use the following procedure to install the IR7W. Refer to figure 3-3. All assembly hardware is included with the fixture.

1. Drill mounting holes in accordance with the Drilling Template provided. Four holes, 8mm Dia., 55mm deep. Attach the Anchor Plate using the four Anchor bolts. Tap the bolts completely in using a hammer and tighten the nuts.

2. Pull the electrical cable through the Vewrtical Support Tube. Install the Slider Block into the groove on the arm, install the arm in the Vertical Support Tube and secure with the Set Screw. Tighten the Set Screw then loosen it 1/4 turn and check the movement of the arm. Set Screw should be flush.

3. Install the O-Ring and Ceiling Cover on the Vertical Support Tube. Install the Vertical Support Tube into the Anchor Plate and temporarily secure with the Clamp and bolts supplied. Align the fixture so the rotation stop is in the desired position and tighten the Clamp bolts.

4. Connect the electrical wires to 120VAC input at the Anchor Plate terminal strip. Place the Ceiling Cover in position and secure with the O-Ring.

5. Connect the Lighthead wires to the Arm wires making sure no metal portion of the connectors is exposed. Install the Lighthead into the Arm and secure with two Flat Head Allen Screws.

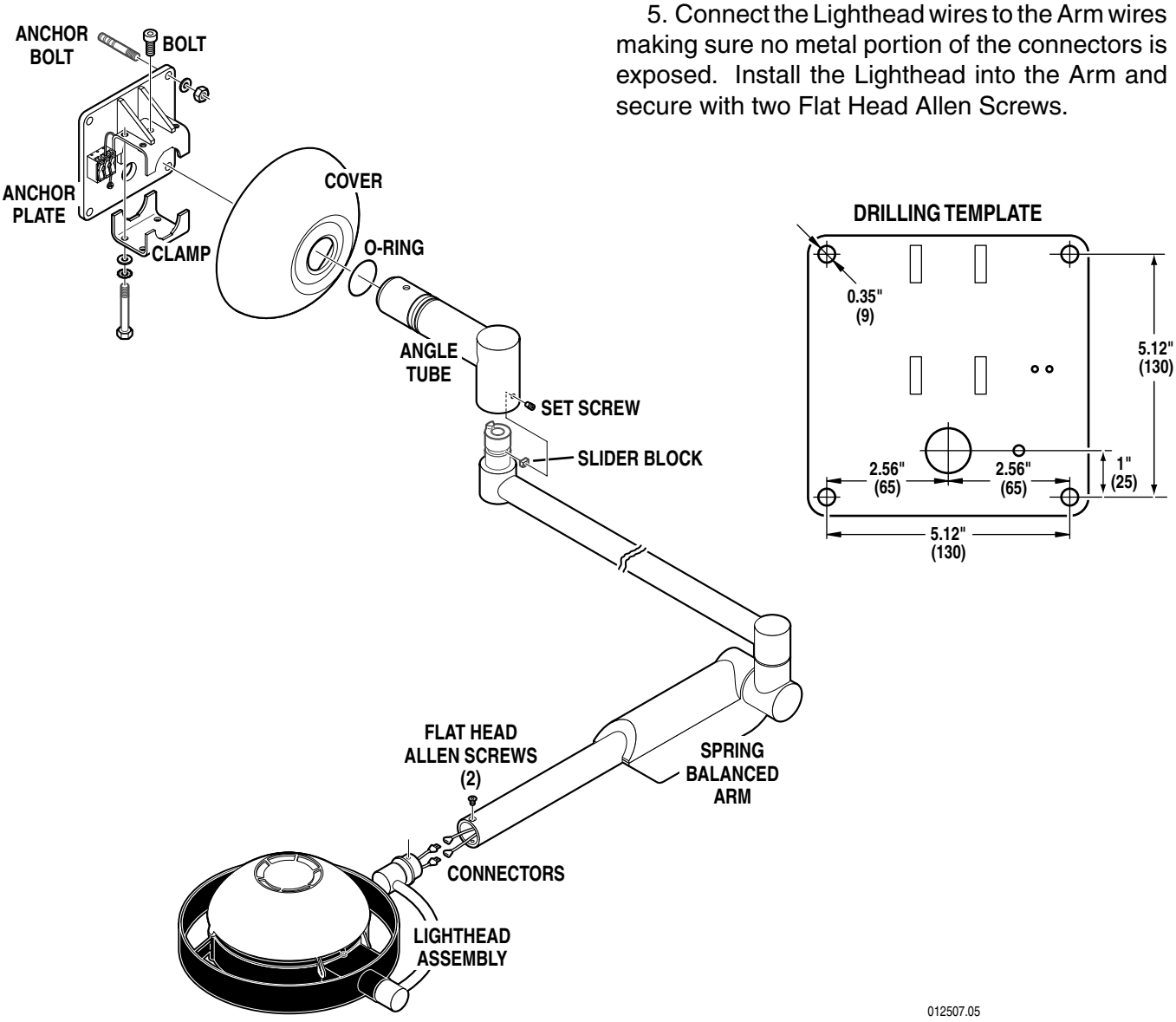
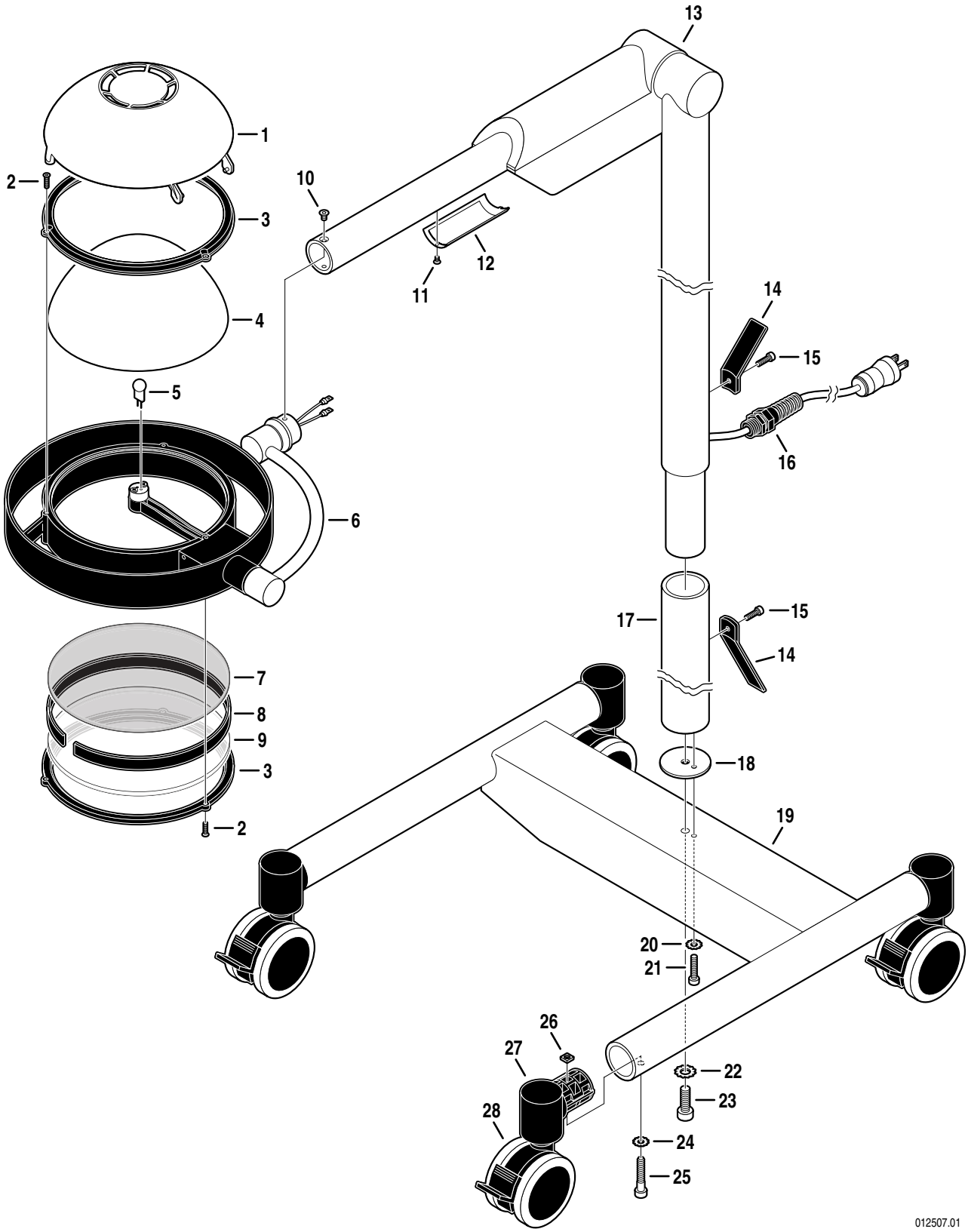


Figure 3-3. Model IR7W Installation

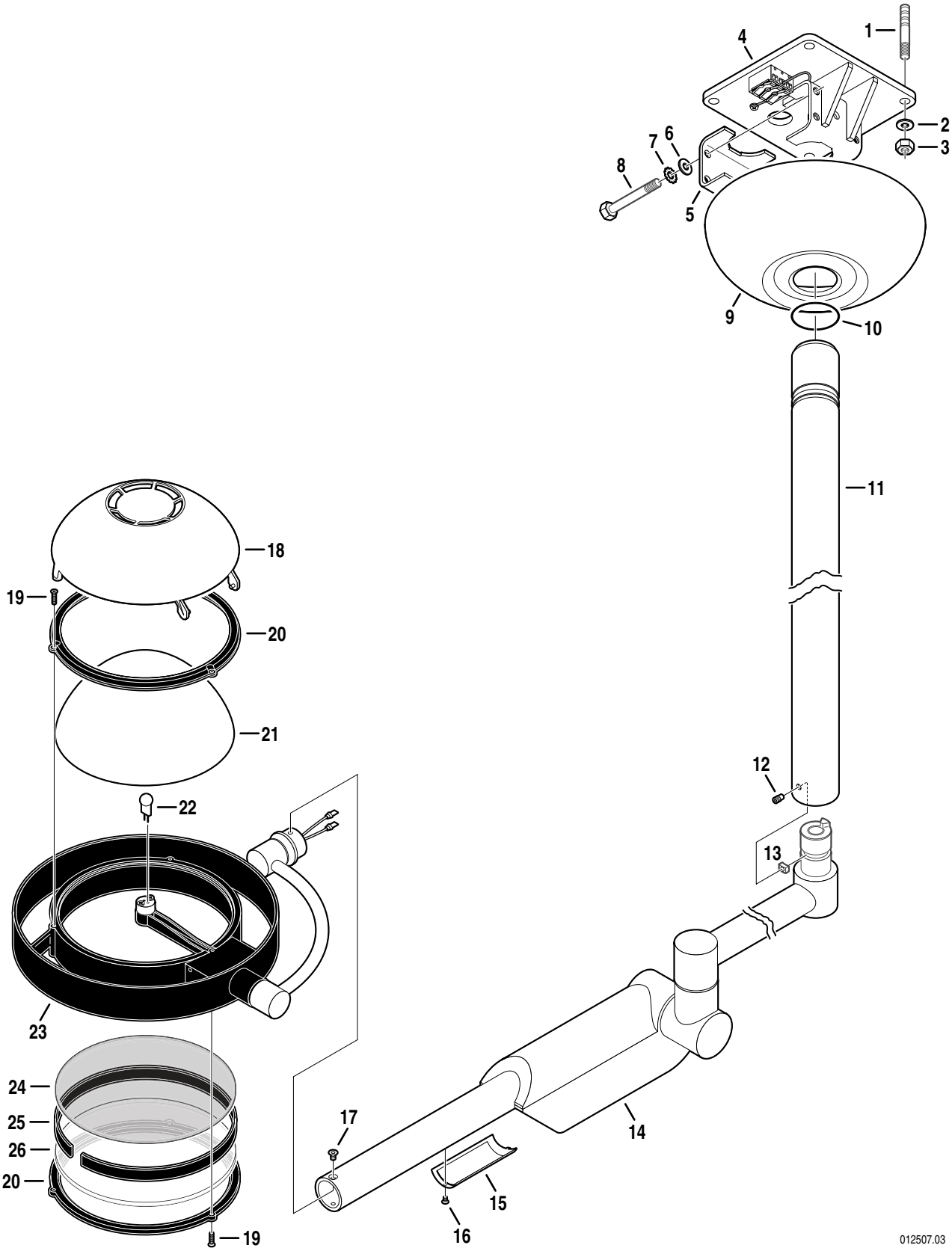
SECTION IV. REPLACEMENT PARTS
4-1. MODEL IR7S - PORTABLE STAND ASSEMBLY



4-1. MODEL IR7S - PORTABLE STAND ASSEMBLY

Item	Part No.	Description	Qty.
1	D-46862-000	COVER, reflector	1
2	D-64188-000	SCREW, allen, flat head, M3 x 16	6
3	D-45908-000	RING, frame	2
4	D-51368-000	REFLECTOR	1
5	D-68615-000	BULB, halogen, 50W (set of 4)	1
6	-----	FRAME	1
7	D-65357-000	FILTER, color correction	1
8	D-74315-000	SPACER	1
9	D-65347-000	LENS	1
10	-----	SCREW, allen, flat head	2
11	D-64662-000	SCREW, allen, flat head, M2 x 5	2
12	D-45867-000	COVER, spring	1
13	-----	ARM, spring balanced	1
14	D-45869-000	SUPPORT, cable	2
15	D-64103-000	SCREW, allen, M4 x 14	2
16	D69-866-000	POWER CORD ASSEMBLY	1
17	-----	TUBE, vertical support	1
18	*	WASHER, support	1
19	-----	BASE	1
20	*	WASHER, star, M6	1
21	*	BOLT, allen	1
22	*	WASHER, star, M8	1
23	*	BOLT, allen	1
24	D-64812-000	WASHER, star, M6	4
25	D-64148-000	BOLT, allen, M6 x 35	4
26	D-64932-000	NUT, square	4
27	D-45868-000	ADAPTER, caster	4
28	D-65709-000	CASTER, locking	4
*	D-53621-000	PARTS SET ASSEMBLY (not shown)	1
		-includes items: 18,20, 21, 22, 23	

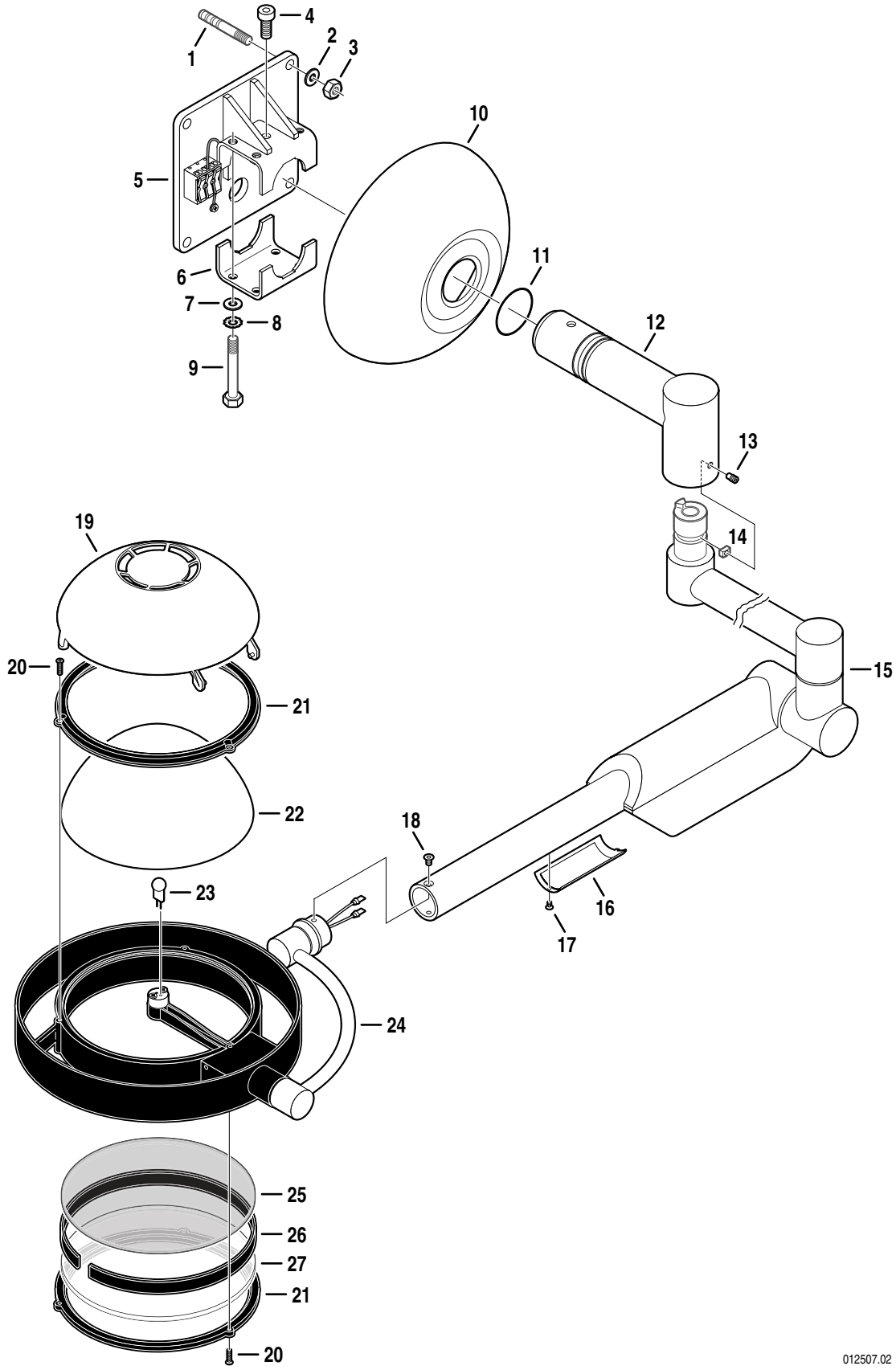
4-2. MODEL IR7 - CEILING MOUNT ASSEMBLY



4-2. MODEL IR7 - CEILING MOUNT ASSEMBLY

Item	Part No.	Description	Qty.
1	*	BOLT, anchor	4
2	*	WASHER, anchor bolt	4
3	*	NUT, anchor bolt	4
4	-----	PLATE, anchor	1
5	D-49251-000	CLAMP	1
6	D-64784-000	WASHER, flat, M8	4
7	D-64814-000	WASHER, star, M8	4
8	D-64011-000	BOLT, hex head, M8 x 80	4
9	*	COVER	1
10	*	O-RING	1
11	D-55235-000	TUBE, vertical support, 0.3m	A/R
	D-55224-000	TUBE, vertical support, 0.5m	A/R
	D-55225-000	TUBE, vertical support, 0.7m	A/R
	D-55226-000	TUBE, vertical support, 0.9m	A/R
	D-55227-000	TUBE, vertical support, 1.1m	A/R
12	*	SCREW, set	1
13	*	SLIDER BLOCK	1
14	-----	ARM, spring balanced	1
15	D-45867-000	COVER, spring	1
16	D-64662-000	SCREW, allen, flat head, M2 x 5	2
17	-----	SCREW, allen, flat head	2
18	D-46862-000	COVER, reflector	1
19	D-64188-000	SCREW, allen, flat head, M3 x 16	6
20	D-45908-000	RING, frame	2
21	D-51368-000	REFLECTOR	1
22	D-68615-000	BULB, halogen, 50W (set of 4)	1
23	-----	FRAME	1
24	D-65357-000	FILTER, color correction	1
25	D-74315-000	SPACER	1
26	D-65347-000	LENS	1
*	D-53620-000	PARTS SET ASSEMBLY (not shown)	1
		- includes items: 1,2,3,9,10,12,13	

4-3. MODEL IR7W - WALL MOUNT ASSEMBLY



4-3. MODEL IR7W - WALL MOUNT ASSEMBLY

Item	Part No.	Description	Qty.
1	*	BOLT, anchor	4
2	*	WASHER, anchor bolt	4
3	*	NUT, anchor bolt	4
4	-----	BOLT, allen	1
5	-----	PLATE, anchor	1
6	D-49251-000	CLAMP	1
7	D-64784-000	WASHER, flat, M8	4
8	D-64814-000	WASHER, star, M8	4
9	D-64011-000	BOLT, hex head, M8 x 80	4
10	*	COVER	1
11	*	O-RING	1
12	-----	TUBE, angle	1
13	*	SCREW, set	1
14	*	SLIDER BLOCK	1
15	-----	ARM, spring balanced	1
16	D-45867-000	COVER, spring	1
17	D-64662-000	SCREW, allen, flat head, M2 x 5	2
18	-----	SCREW, allen, flat head	2
19	D-46862-000	COVER, reflector	1
20	D-64188-000	SCREW, allen, flat head, M3 x 16	6
21	D-45908-000	RING, frame	2
22	D-51368-000	REFLECTOR	1
23	D-68615-000	BULB, halogen, 50W (set of 4)	1
24	-----	FRAME	1
25	D-65357-000	FILTER, color correction	1
26	D-74315-000	SPACER	1
27	D-65347-000	LENS	1
*	D-53620-000	PARTS SET ASSEMBLY (not shown)	1
		-includes items: 1, 2, 3, 10, 11, 13, 14	

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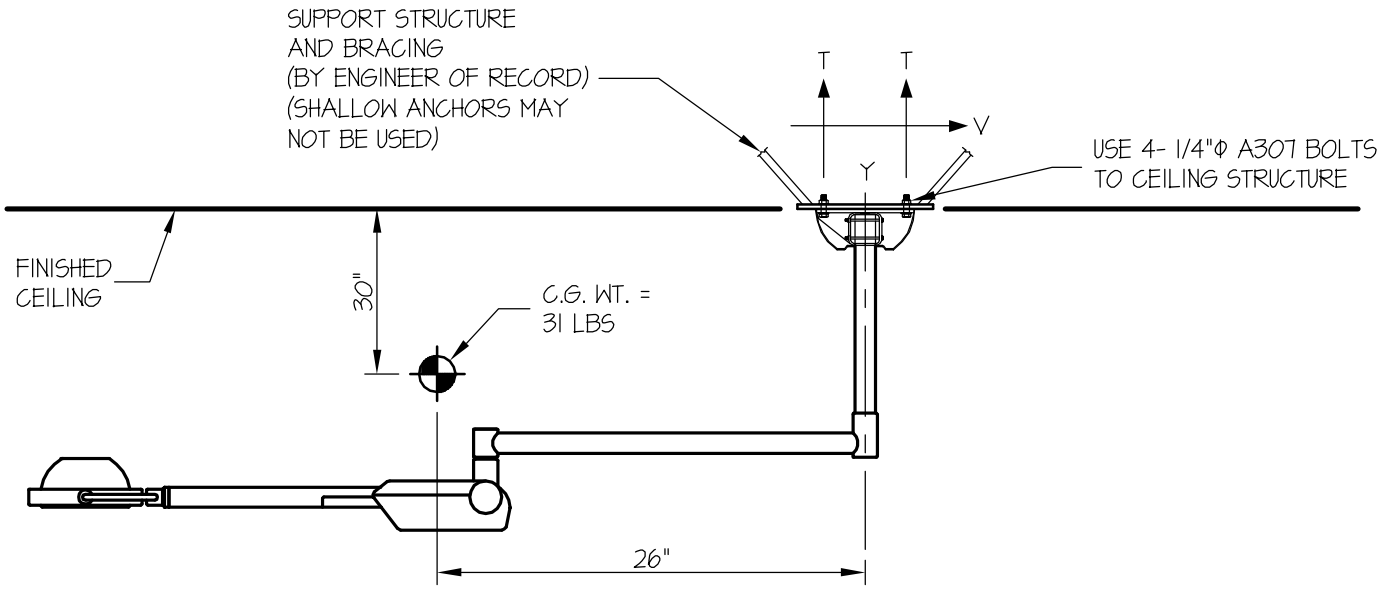
SKYTRON SURGICAL PRODUCTS	DES. R. LA BRIE	SHEET 1
IRIS SERIES EXAMINATION LIGHTING **(CEILING MOUNTED)**	JOB NO. 11-0744	
	DATE 11/19/07	OF 2 SHEET

SEISMIC ANCHORAGE CALCULATION

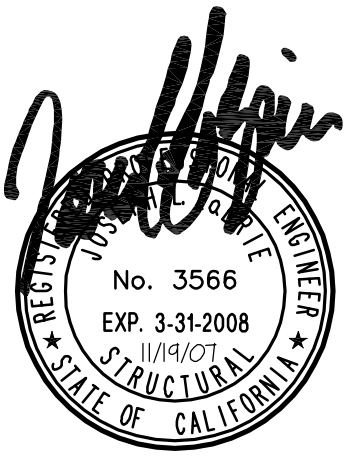


ELEVATION

T_{MAX} = 392 LBS/BOLT
V_{MAX} = 14 LBS/BOLT

NOTES:

1. FORCES ARE DETERMINED PER 2001 CALIFORNIA BUILDING CODE - SECTION 1632A AND HAVE BEEN FACTORED TO REPRESENT WORKING DESIGN LOADS, NOT ULTIMATE.
   HORIZONTAL FORCE (V_H) = 1.77(W) (C_a = .66, a_p = 2.5, I_p = 1.5, R_p = 3.0)
   VERTICAL FORCE (V_V) = 0.35W
2. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS CALCULATION ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. ARCHITECT OR STRUCTURAL ENGINEER OF RECORD SHALL PROVIDE SUPPORT STRUCTURE TO SUPPORT WEIGHTS AND FORCES SHOWN.



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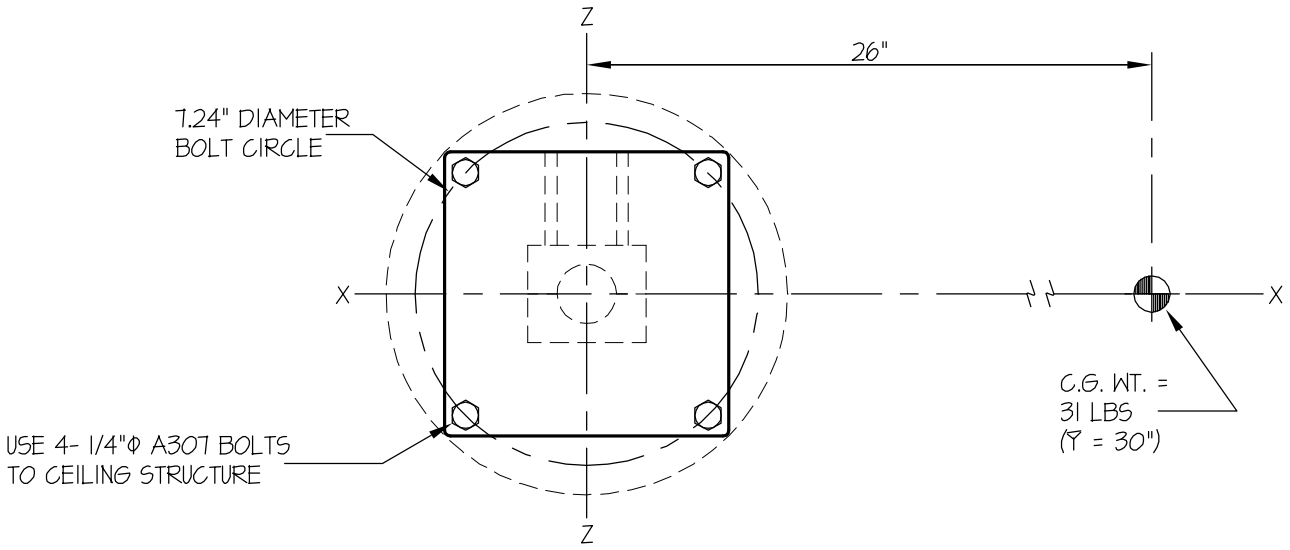
SKYTRON SURGICAL PRODUCTS

IRIS SERIES EXAMINATION LIGHTING (CEILING MOUNTED)

DES. R. LA BRIE
JOB NO. 11-0744
DATE 11/19/07
SHEET 2 OF 2 SHEET

SEISMIC ANCHORAGE CALCULATION



PLAN AT CEILING

LOADS:

WEIGHT = 31 LBS
HORIZONTAL FORCE (V_H) = 55 LBS
VERTICAL FORCE (V_V) = 11 LBS

BOLT GROUP PROPERTIES:

I_{X-X} = 26 in.^{4}
I_{Z-Z} = 26 in.^{4}
I_{Y-Y} = 52 in.^{4}

MOMENTS:

M_{XX} = 55# (30") + (31# + 11#)26" = 2,742"#
M_{ZZ} = 55# (30") + (31# + 11#)26" = 2,742"#
M_{YY} = 0"# (UNIT IS FREE TO ROTATE 360° AROUND Y-Y AXIS.)

BOLT FORCES:

TENSION (T)

$$T = \frac{2742"\#\ (3.62")}{26} + \frac{31\# + 11\#}{4\ \text{BOLTS}} = 392\ \text{LBS/BOLT (MAX)}$$

SHEAR (V)

$$V = \frac{55\#}{4} = 14\ \text{LBS/BOLT (MAX)}$$

STRESS CHECK: 1/4"ø A307 BOLTS

$f_V = 14\#/.05^{sq.in.} = .285$ psi $F_V = 10$ ksi

$F_T = 26 - 1.8 F_V \leq 20$ ksi
$= 26 - 1.8(.285) = 25.5 > 20$
$= 20$ ksi

$f_T = 392\#/.05^{sq.in.} = 8.0$ ksi ≤ 20 ksi

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Office of Statewide Health Planning and Development

ANCHORAGE PRE-APPROVAL

OPA-1762

Equipment Manufacturer: Skytron Surgical Products

Equipment Type: Iris Series Examination Lighting (Ceiling Mounted)

GENERAL NOTES

1. FORCES ARE DETERMINED PER 2001 CBC 1632A.2, EQUATIONS 32-A1, A2 & A3, WHERE $C_a = .66, a_p = 2.5, I_p = 1.5$ & $R_p = 3.0$
   PLEASE NOTE THAT THE RESULT FROM EQUATIONS 32-A1, A2 & A3
   HAVE BEEN REDUCED BY A FACTOR OF 1.4 FOR ALLOWABLE STRESS DESIGN.
2. THIS PRE-APPROVAL CONFORMS TO THE 2001 CALIFORNIA BUILDING CODE.
3. THE DETAILS IN THIS PRE-APPROVAL MAY BE USED AT ANY LOCATION AND AT ANY HEIGHT IN THE STATE OF CALIFORNIA.
4. THE ENGINEER OF RECORD SHALL DESIGN BACKING BARS, STUDS, FRAMES ABOVE THE CEILING, ETC.
   WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS. THE ENGINEER OF RECORD
   SHALL ALSO VERIFY THE ADEQUACY OF THE STRUCTURES (SUCH AS WALLS AND FLOORS)
   WHICH SUPPORT THE UNITS FOR THE LOADS IMPOSED ON THEM BY THE UNITS AS WELL AS ALL OTHER LOADS.
5. ALL ANCHOR FORCES SHOWN ON THE DRAWINGS ARE WORKING LOADS (AS OPPOSED TO ULTIMATE LOADS)
   AND MAY BE USED FOR ALLOWABLE STRENGTH DESIGN.

REGISTERED PROFESSIONAL ENGINEER
SCOTT LaBRIE
No. 3566
EXP. 3-31-2008
11/19/07
STRUCTURAL
STATE OF CALIFORNIA

APPROVED
Fixed Equipment Anchorage
Office of Statewide Health Planning and Development
OPA-1762
on
Monday, November 19, 2007
Anthony R. Pike (916) 654-3362

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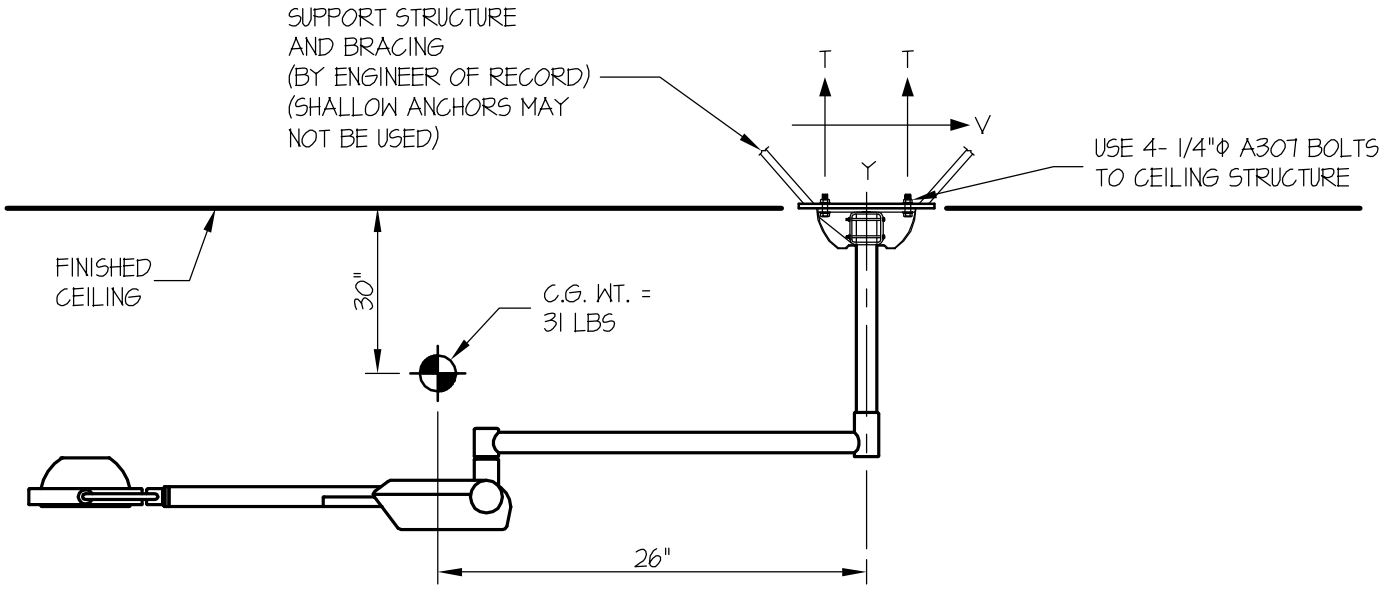
SKYTRON SURGICAL PRODUCTS

IRIS SERIES EXAMINATION LIGHTING (CEILING MOUNTED)

DES. R. LA BRIE
JOB NO. 11-0744
DATE 11/19/07
SHEET 2 OF 3 SHEET

SEISMIC ANCHORAGE PRE-APPROVED DETAIL



ELEVATION

T_{MAX} = 392 LBS/BOLT
V_{MAX} = 14 LBS/BOLT

NOTES:

1. ANCHORAGE DESIGN PER 2001 CALIFORNIA BUILDING CODE - SECTION 1632A AND HAVE BEEN FACTORED TO REPRESENT WORKING DESIGN LOADS, NOT ULTIMATE.
   HORIZONTAL FORCE (V_H) = 1.77W (C_a = .66, I_p = 1.5, a_p = 2.5, R_p = 3.0)
   VERTICAL FORCE (V_V) = 0.35W
2. CENTER OF GRAVITY (C.G.) WEIGHT IS A MAXIMUM. THIS PRE-APPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
3. ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN, IN ADDITION TO ALL OTHER LOADS.
4. SEE GENERAL NOTES: SHEET 1

REGISTERED PROFESSIONAL ENGINEER
R. LaBRIE
No. 3566
EXP. 3-31-2008
11/19/07
STRUCTURAL
STATE OF CALIFORNIA

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Fixed Equipment Anchorage
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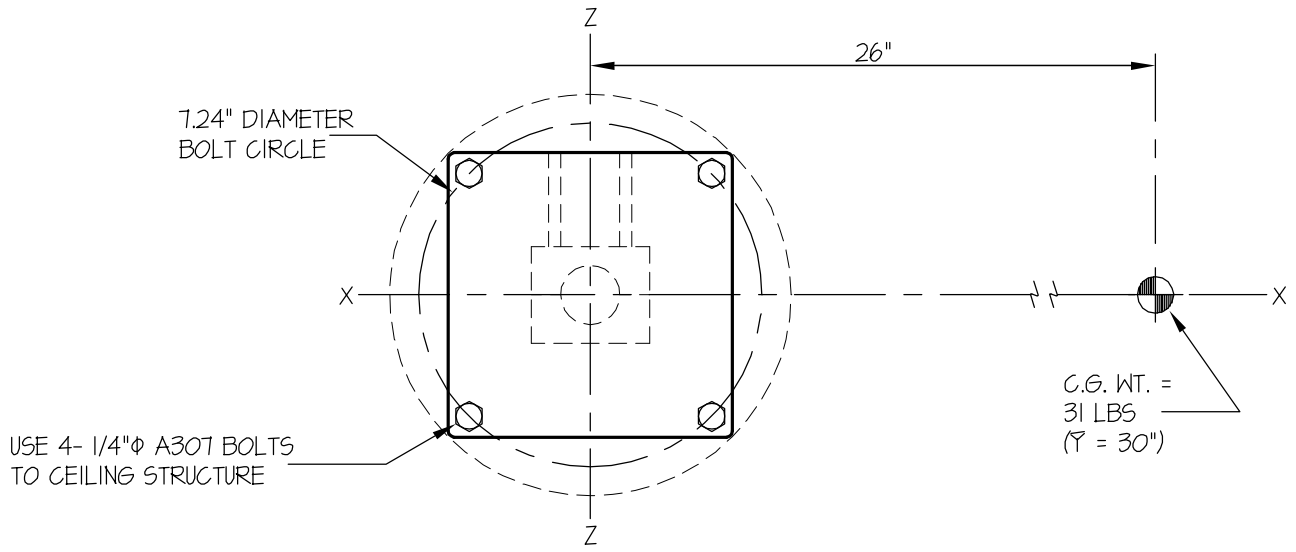
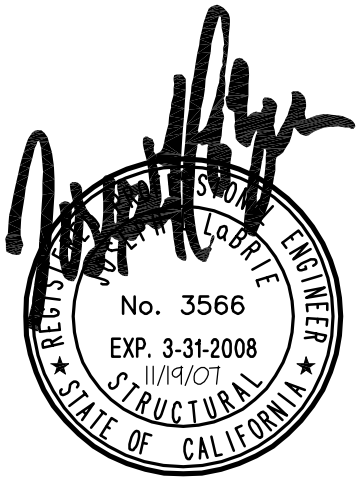
IRIS SERIES EXAMINATION LIGHTING (CEILING MOUNTED)	JOB NO. 11-0744	
	DATE 11/19/07	OF 3 SHEET

SEISMIC ANCHORAGE PRE-APPROVED DETAIL



PLAN AT CEILING



APPROVED
Fixed Equipment Anchorage
Office of Statewide Health Planning and Development

OPA-1762

on

Monday, November 19, 2007

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